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United States Department of Agriculture

Soil Conservation Service

APR 0 4 1986

Colorado · New Mexico Water Supply Outlook

March 1, 1986

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Foreward

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave, Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado	2490 West 26th Ave, 3d Fl, Denver CO, 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
New Mexico	517 Gold Ave, SW, Room 3301, Albuquerque, NM 87102-3157
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave, 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies.

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 95802; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Colorado-New Mexico Water Supply Outlook

and

Federal - State - Private Cooperative Snow Surveys

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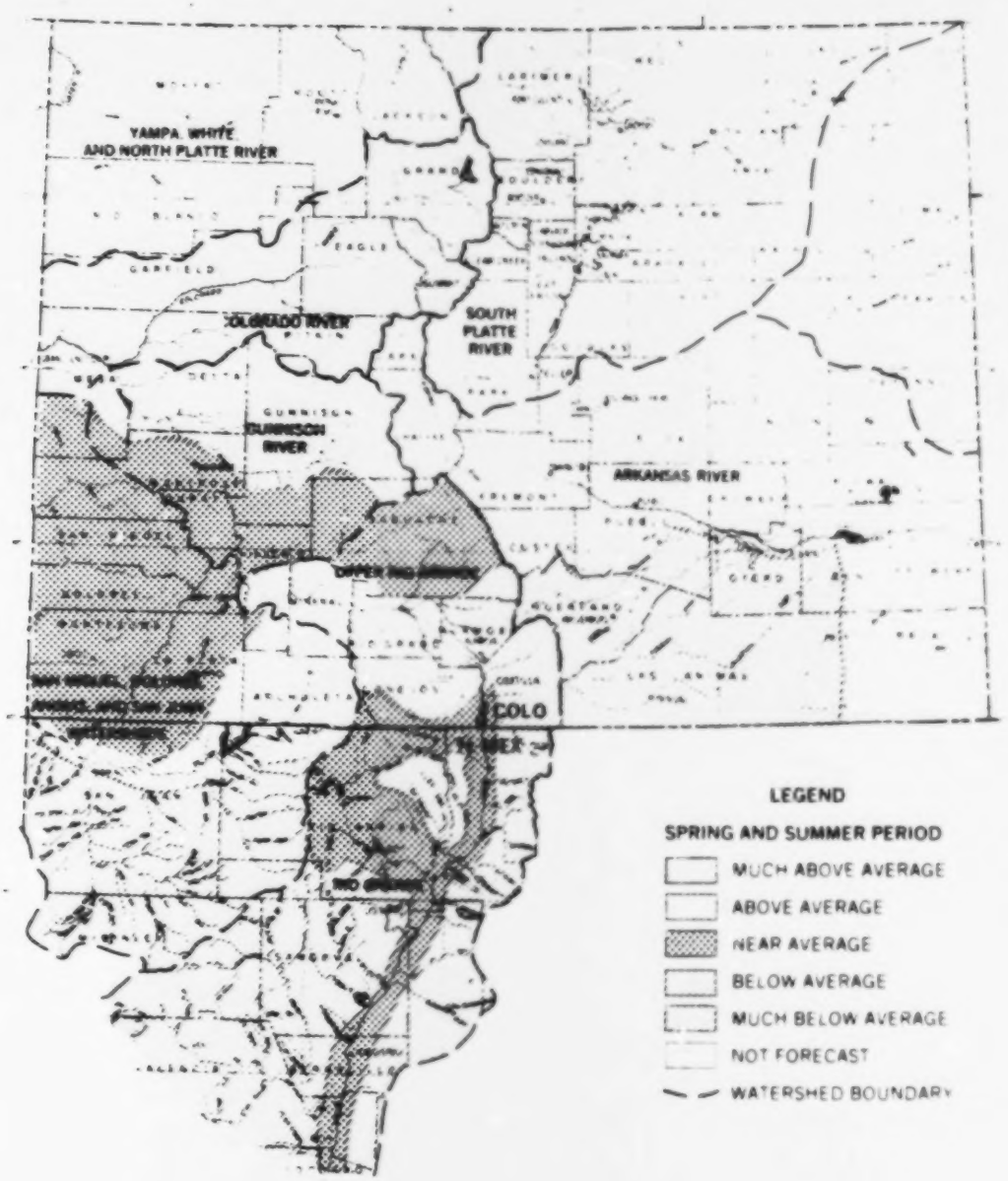

STREAMFLOW PROSPECTS
COLORADO

SOURCE: Data compiled by SCS

GENERAL OUTLOOK

SUMMARY:

FEBRUARY BROUGHT A DRAMATIC CHANGE IN CONDITIONS FROM THE PREVIOUS DRY PERIOD. MUCH OF COLORADO RECEIVED HEAVY AND CONTINUOUS PRECIPITATION DURING MID-FEBRUARY. THE GREATEST AMOUNTS OF PRECIPITATION WERE RECEIVED AT THE HIGHER ELEVATIONS, INCREASING THE SNOWPACK STATISTICS OVER LAST MONTH'S FIGURES. STREAMFLOW FORECAST VOLUMES HAVE INCREASED ACCORDINGLY THROUGHOUT MUCH OF COLORADO. NORTHERN NEW MEXICO'S DRY CONDITIONS CONTINUED THROUGH THE MONTH, AND EXPECTED WATER SUPPLIES ARE BELOW NORMAL.

SNOWPACK:

SNOWPACK CONDITIONS INCREASED FAVORABLY DURING FEBRUARY AS A RESULT OF THE MAJOR SHIFT IN WEATHER PATTERNS. STATEWIDE SNOWPACK IN COLORADO INCREASED FROM 104% OF AVERAGE ON FEBRUARY 1, TO 120% OF AVERAGE FOR MARCH 1. SNOWPACK IN THE NORTHERN PORTION OF NEW MEXICO HAS REMAINED AT 68% OF AVERAGE FOR THE SECOND STRAIGHT MONTH. THIS CURRENT FIGURE IS ONLY 48% OF LAST YEAR'S MARCH 1 SNOWPACK. THE NORTHERN AND CENTRAL MOUNTAINS OF COLORADO INCREASED MOST DRAMATICALLY DURING THE MONTH. THE SOUTH PLATTE BASIN INCREASED FROM 106% OF AVERAGE ON FEBRUARY 1, TO THE HIGHEST BASIN PERCENTAGE IN COLORADO AT 137% ON MARCH 1. THE ARKANSAS BASIN INCREASED FROM BELOW NORMAL LAST MONTH, TO 102% OF AVERAGE THIS MONTH, LEAVING ALL OF COLORADO'S BASINS ABOVE AVERAGE FOR MARCH 1.

PRECIPITATION:

PRECIPITATION AMOUNTS VARIED WITH ELEVATION DURING FEBRUARY. NEARLY ALL OF THE HIGHER ELEVATION STATIONS RECEIVED ABOVE TO MUCH ABOVE NORMAL PRECIPITATION FOR THE MONTH, WHILE MANY OF THE LOWER ELEVATION STATIONS RECEIVED BELOW NORMAL PRECIPITATION FOR FEBRUARY. THE YAMPA, WHITE, NORTH PLATTE, COLORADO, GUNNISON, AND ARKANSAS BASINS ALL RECEIVED NEARLY TWICE THE NORMAL PRECIPITATION FOR THE MONTH OF FEBRUARY. PRECIPITATION IN THE UPPER PORTION OF THE RIO GRANDE BASIN WAS SLIGHTLY BELOW NORMAL FOR THE MONTH, WHILE THE LOWER PORTION OF THE BASIN IN NEW MEXICO RECEIVED 53% ABOVE THE MONTHLY AVERAGE. SEASONAL TOTALS ARE ALL ABOVE NORMAL THROUGHOUT COLORADO AND NORTHERN NEW MEXICO. THE HIGHEST SEASONAL ACCUMULATIONS ARE IN THE YAMPA, WHITE, AND NORTH PLATTE BASINS, WHICH AVERAGE 44% ABOVE NORMAL FOR THE WATER YEAR.

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RESERVOIRS:

WATER STORAGE IN 69 MAJOR RESERVOIRS THROUGHOUT COLORADO IS ABOVE THE AVERAGE FOR MARCH 1. CURRENT STORAGE IS 54% OF AVERAGE, AND 63% OF LAST YEAR'S FIGURES. RESERVOIR STORAGE IN NORTHERN NEW MEXICO REMAINS NEARLY FOUR TIMES NORMAL, THIS IS 63% OF THE USABLE CAPACITY. THESE LARGE AMOUNTS OF STORED WATER WILL HELP TO SUPPLEMENT ANY LATE SEASON SHORTAGES WHICH MAY RESULT FROM THE BELOW NORMAL SHOWPACK, ESPECIALLY THROUGHOUT NEW MEXICO.

STREAMFLOW:

SNOWMELT RUNOFF FORECAST VOLUMES HAVE GENERLLY INCREASED THROUGHOUT COLORADO, WHILE MUCH OF NEW MEXICO'S FORECASTS HAVE DECREASED DURING FEBRUARY. THE HIGHEST STREAMFLOW VOLUMES OCCUR IN THE SOUTH PLATTE, NORTH PLATTE, LARAMIE, AND COLORADO RIVER BASINS. MOST OF THESE FORECASTS RANGE FROM 110% TO 140% OF AVERAGE. STREAMFLOW FORECASTS IN THE SOUTH PLATTE BASIN INCREASED THE MOST IN COLORADO, WHERE THE BIG THOMPSON RIVER AT DRAKE IS FORECAST AT 54% ABOVE AVERAGE. NEAR AVERAGE RUNOFF CONDITIONS ARE EXPECTED IN THE GUNNISON, ARKANSAS, UPPER RIO GRANDE, AND EXTREME SOUTHWESTERN DRAINAGES. THE MAJOR EXCEPTION LIES IN THE LOWER RIO GRANDE BASIN WHERE ALL STREAMS WITH HEADWATERS IN OR NEAR NEW MEXICO ARE EXPECTED TO FLOW WITH ONLY 70% TO 80% OF NORMAL VOLUMES THIS YEAR.

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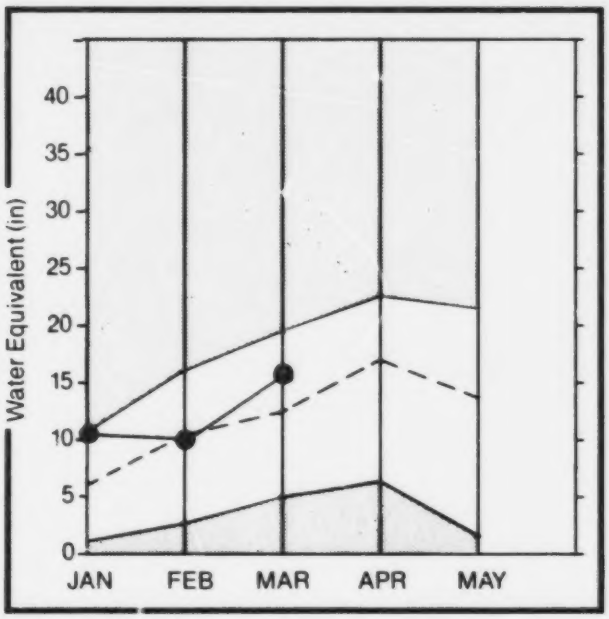
Gunnison River Basin in Colorado

Mountain snowpack* (inches)

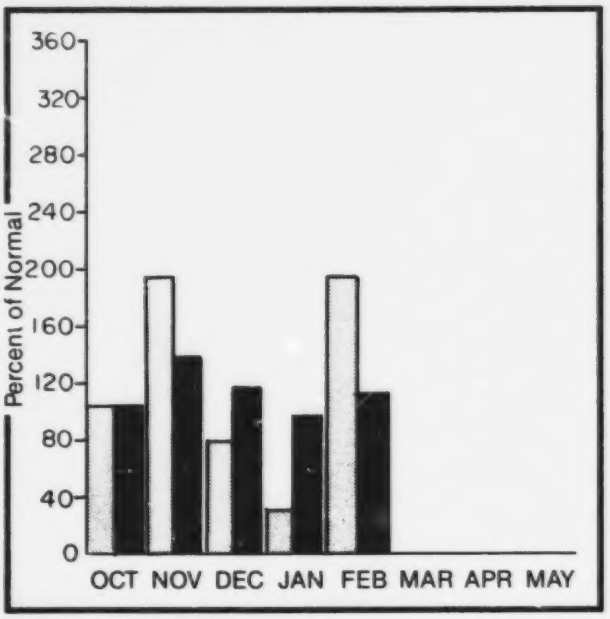


*Based on selected stations

Maximum ——— Average - - - -

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

SNOWPACK IN THE GUNNISON BASIN IS 14% ABOVE AVERAGE, AND 8% ABOVE LAST YEAR. THIS IS UP 11% FROM LAST MONTH'S FIGURES. LOW ELEVATION PRECIPITATION WAS NEARLY TWICE THE MONTH'S AVERAGE. THIS HELPED BRING THE SEASONAL TOTAL TO 113% OF NORMAL. STREAMFLOW VOLUMES ALONG THE MAIN STEM OF THE GUNNISON RIVER AND STREAMS DRAINING THE GRAND MESA AREA, ARE EXPECTED TO HAVE ABOVE AVERAGE STREAMFLOWS. THE UNCOMPAGHRE RIVER IS FORECASTED TO HAVE ONLY NEAR AVERAGE FLOWS. RESERVOIR STORAGE IS CURRENTLY 115% OF AVERAGE.

For more information contact your local Soil Conservation Service office.

GUNNISON RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
TAYLOR RIVER INF to Taylor Park Res	APR-SEP	115.0	150.0	130	155	113				
EAST RIVER at Almont	APR-SEP	202.0	250.0	127	150	110				
GUNNISON R INFLOW to Blue Mesa Res *	APR-SEP	785.0	1050.0	133	161	112				
NORTH FORK OF GUNNISON *	APR-SEP	285.9	330.0	115	147	84				
SURFACE CREEK near Cedaredge	APR-SEP	17.3	20.0	115	150	81				
UNCOMPAHGRE RIVER at Colona	APR-SEP	134.0	125.0	93	122	72				
GUNNISON RIVER near Grand Junction *	APR-SEP	1258.0	1750.0	139	170	110				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE MESA	830.0	[illegible]	[illegible]	[illegible]
CRAWFORD	14.3	[illegible]	[illegible]	[illegible]
FRUITGROWERS	4.3	[illegible]	[illegible]	[illegible]
FRUITLAND	9.2	[illegible]	[illegible]	[illegible]
MORROW POINT	121.0	[illegible]	[illegible]	[illegible]
TAYLOR PARK	106.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
GUNNISON	12	115	122
SURFACE CREEK	3	103	124
UNCOMPAHGRE	4	85	91

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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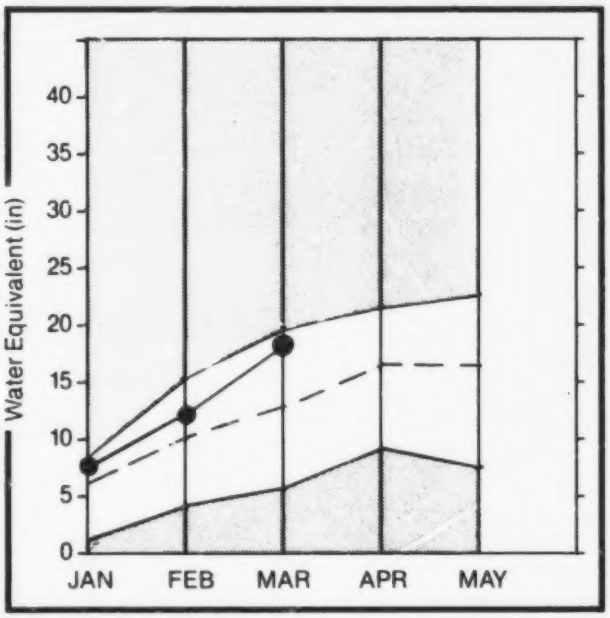
Colorado River Basin in Colorado

Mountain snowpack* (inches)

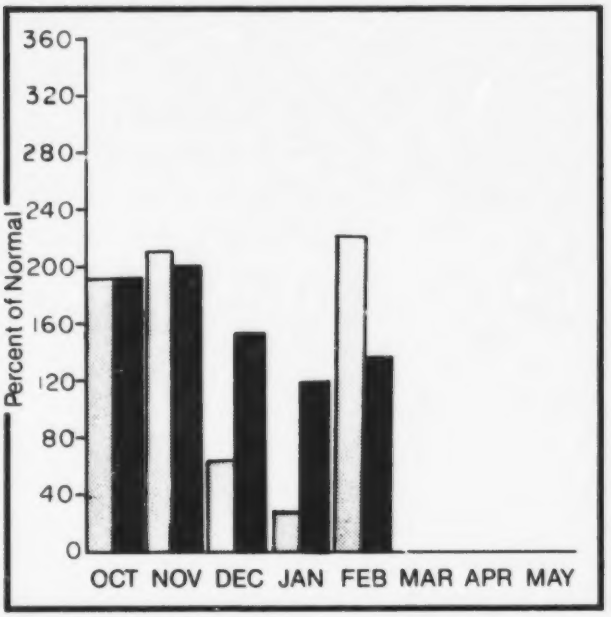


*Based on selected stations

Maximum ——— Average - - - -

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

A MAJOR WINTER STORM PRODUCED HEAVY SNOWPACK ACCUMULATIONS DURING THE MIDDLE OF FEBRUARY. HIGH ELEVATION SNOWPACK NEAR THE HEADWATERS OF THE COLORADO RIVER IS 24% ABOVE AVERAGE COMPARED TO 9% ABOVE AVERAGE LAST MONTH. LOW ELEVATION PRECIPITATION REPORTED OVER 200% OF AVERAGE FOR THE MONTH. SEASONAL TOTALS ARE CURRENTLY 138% OF NORMAL. SNOWMELT RUNOFF VOLUMES ARE ANTICIPATED TO HAVE ABOVE AVERAGE FLOWS. RESERVOIR STORAGE, AS INDEXED BY 8 MAJOR RESERVOIRS, IS CURRENTLY 130% OF AVERAGE.

For more information contact your local Soil Conservation Service office.

UPPER COLORADO RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLORADO RIVER INF to Granby Res *	APR-SEP	231.0	325.0	[illegible]	[illegible]	[illegible]				
WILLOW CREEK INF to Willow Creek Res	APR-SEP	51.7	80.0	[illegible]	[illegible]	[illegible]				
WILLIAMS FORK near Parshall *	APR-SEP	63.0	95.0	[illegible]	[illegible]	[illegible]				
E. F. TROUBLESOME CR nr Troublesome	APR-SEP	19.3	29.0	[illegible]	[illegible]	[illegible]				
BLUE RIVER INFLOW to Dillon Res	APR-SEP	171.0	250.0	[illegible]	[illegible]	[illegible]				
BLUE R INF to Green Mountain Res *	APR-SEP	301.0	440.0	[illegible]	[illegible]	[illegible]				
COLORADO RIVER near Dotsero *	APR-SEP	1495.0	2200.0	[illegible]	[illegible]	[illegible]				
EAGLE RIVER below Gypsum	APR-SEP	315.0	450.0	[illegible]	[illegible]	[illegible]				
ROARING FORK at Glenwood Springs *	APR-SEP	733.0	975.0	[illegible]	[illegible]	[illegible]				
COLORADO RIVER near Cameo *	APR-SEP	2455.0	3520.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
DILLON	250.7	[illegible]	[illegible]	[illegible]
GRANBY	465.6	[illegible]	[illegible]	[illegible]
GREEN MOUNTAIN	139.0	[illegible]	[illegible]	[illegible]
HOMESTAKE	43.0	[illegible]	[illegible]	[illegible]
RUEDI	102.0	[illegible]	[illegible]	[illegible]
VEGA	32.0	[illegible]	[illegible]	[illegible]
WILLIAMS FORK	97.0	[illegible]	[illegible]	[illegible]
WILLOW CREEK	9.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
BLUE RIVER	6	[illegible]	[illegible]
COLORADO	20	[illegible]	[illegible]
PLATEAU	3	[illegible]	[illegible]
ROARING FORK	7	[illegible]	[illegible]
WILLIAMS FORK	4	[illegible]	[illegible]
WILLOW CREEK	2	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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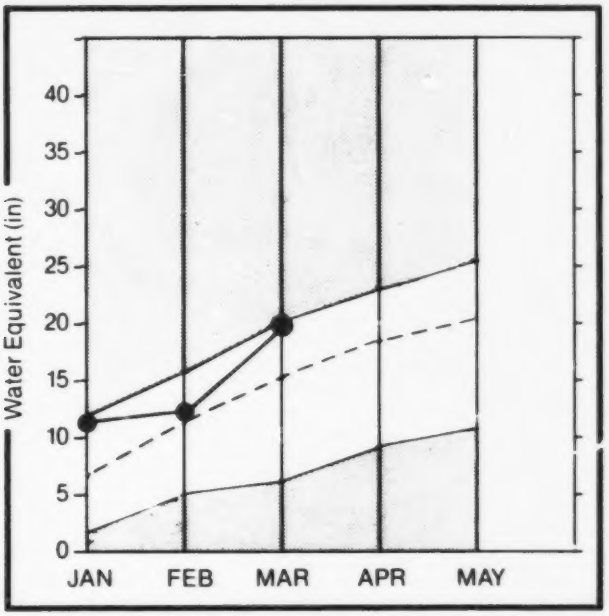
South Platte River Basin in Colorado

Mountain snowpack* (inches)

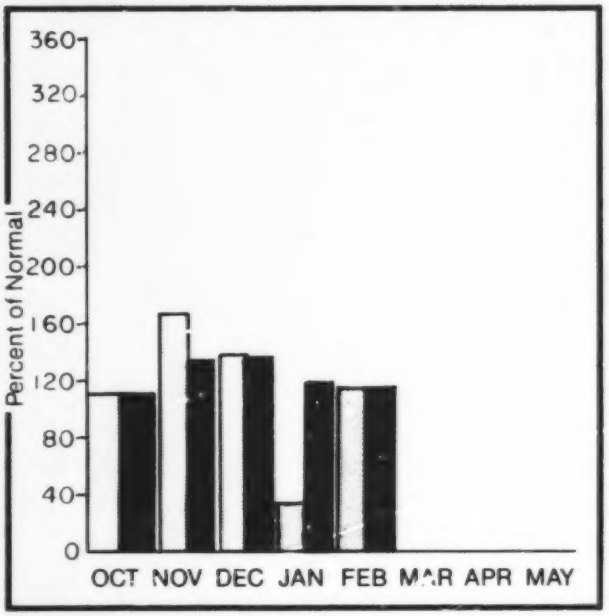


*Based on selected stations

Maximum ——— Average – – – –

Minimum — — Current ●———●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

SNOWPACK STATISTICS IN THE SOUTH PLATTE BASIN DID A TREMENDOUS TURNAROUND FROM LAST MONTH. SNOWPACK IS CURRENTLY 137% OF AVERAGE, UP 31% FROM LAST MONTH. THE BIG THOMPSON, SAINT VRAIN, AND CACHE LA POUDRE WATERSHEDS ALL HAVE SNOWPACK FIGURES OVER 140% OF NORMAL. STREAMFLOW FORECAST VOLUMES HAVE RISIN AS A RESULT OF THE INCREASE IN SNOWPACK. ALL STREAMS ARE EXPECTED TO HAVE ABOVE NORMAL SPRING-SUMMER VOLUMES IF AVERAGE PRECIPITATION IS RECEIVED THE NEXT COUPLE OF MONTHS. RESERVOIR STORAGE IS 9% ABOVE AVERAGE.

For more information contact your local Soil Conservation Service office.

SOUTH PLATTE RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SOUTH PLATTE RIVER at South Platte *	APR-SEP	197.0	219.0	110	159	76				
BEAR CREEK at Morrison	APR-SEP	28.7	33.0	114	233	65				
CLEAR CREEK at Golden *	APR-SEP	127.0	165.0	129	183	98				
SOUTH BOULDER CR nr Eldorado Springs	APR-SEP	42.1	56.8	134	188	102				
BOULDER CREEK at Orodell	APR-SEP	47.0	65.0	138	179	119				
ST. VRAIN CREEK at Lyons	APR-SEP	79.0	95.4	120	170	89				
BIG THOMPSON RIVER at Drake *	APR-SEP	114.0	175.0	153	197	113				
CACHE LA POUDRE R at Canyon Mouth *	APR-SEP	268.0	390.0	145	193	119				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
ANTERO	16.0	12.0	14.0	14.2
BARK LAKE	32.0	23.0	23.0	22.9
BLACK HOLLOW	8.0	7.0	8.0	8.0
BOYD LAKE	44.0	39.0	38.0	36.2
CACHE LA POUDRE	10.0	8.2	8.0	7.1
CARTER	113.5	108.1	108.0	98.0
CHAMBERS LAKE	9.0	8.0	6.0	5.4
CHEESMAN	79.0	77.0	76.0	69.3
COBB LAKE	34.0	22.3	19.0	23.4
ELEVEN MILE	97.8	96.0	96.0	88.1
EMPIRE	38.0	31.0	22.0	27.6
FOSSIL CREEK	12.0	11.1	8.0	7.6
GROSS	43.0	38.0	38.0	36.5
HALLIGAN	6.4	6.0	4.0	4.2
HORSETOOTH	143.5	133.0	111.0	98.3
JACKSON	35.0	26.0	28.0	28.1
JULESBURG	28.0	18.0	18.0	18.2
LAKE LOVELAND	14.0	8.0	10.0	9.1
LONE TREE	9.0	5.0	8.0	6.0
MARIANO	6.0	5.0	5.0	5.6
MARSHALL	10.0	7.0	7.0	6.3
MARSTON	18.0	13.0	13.0	13.0
MILTON	24.0	15.0	15.0	13.6
POINT OF ROCKS	70.0	60.0	60.0	60.0
PREWITT	33.0	17.0	17.0	19.2
RIVERSIDE	58.0	56.0	56.0	56.0
SPINNEY MOUNTAIN	48.0	37.0	---	---
STANDLEY	42.0	35.0	35.0	33.0
TERRY LAKE	8.0	5.0	5.0	5.1
UNION	13.0	11.0	10.0	10.1
WINDSOR	19.0	9.0	9.0	10.0
HORSECREEK	16.0	12.0	10.0	10.3

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
BIG THOMPSON	7	138	140
BOULDER	5	157	116
CACHE LA POUDRE	8	157	147
CLEAR CREEK	5	150	125
SAINT VRAIN	3	210	147
SOUTH PLATTE	7	126	121

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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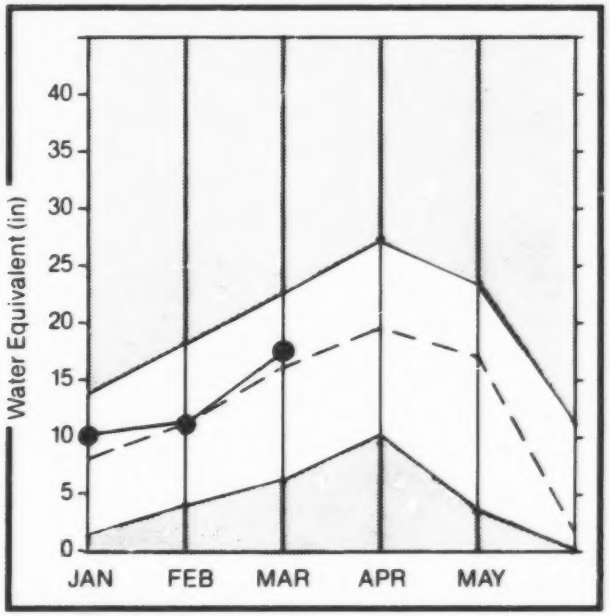
Yampa, White and North Platte River Basins in Colorado

Mountain snowpack* (inches)

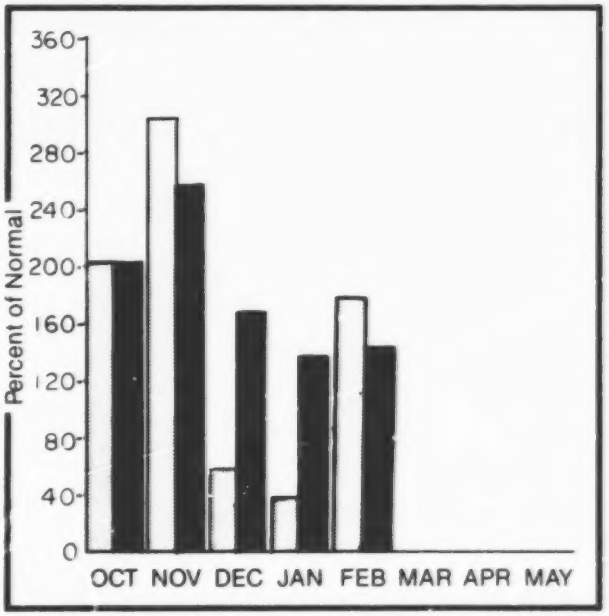


*Based on selected stations

Maximum ——— Average – – – –

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

WATER SUPPLIES ARE EXPECTED TO BE GOOD TO EXCELLENT THROUGHOUT MOST OF THE AREA. HIGHEST SNOWMELT VOLUMES ARE EXPECTED IN THE LARAMIE AND NORTH PLATTE RIVERS. SNOWPACK IN THE LARAMIE DRAINAGE IS 62% ABOVE AVERAGE, WHILE THE YAMPA AND WHITE RIVER BASINS ARE 117% AND 115% OF AVERAGE RESPECTIVELY. LOW ELEVATION PRECIPITATION WAS 183% OF AVERAGE FOR THE MONTH, AND 144% FOR THE WATER YEAR WHICH BEGAN OCTOBER 1, 1985.

For more information contact your local Soil Conservation Service office.

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YAMPA, WHITE, AND NORTH PLATTE RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
LARAMIE RIVER near Woods	APR-SEP	132.0	175.0	132	141	105				
NORTH PLATTE RIVER at Northgate	APR-SEP	262.0	330.0	125	150	102				
YAMPA RIVER at Steamboat Springs	APR-SEP	284.0	320.0	112	135	72				
ELK RIVER at Clark	APR-SEP	207.0	230.0	111	130	75				
YAMPA RIVER near Maybell	APR-SEP	956.0	1075.0	112	134	91				
LITTLE SNAKE RIVER at Lily	APR-SEP	357.0	450.0	126	153	104				
WHITE RIVER near Meeker	APR-SEP	304.0	385.0	126	148	108				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

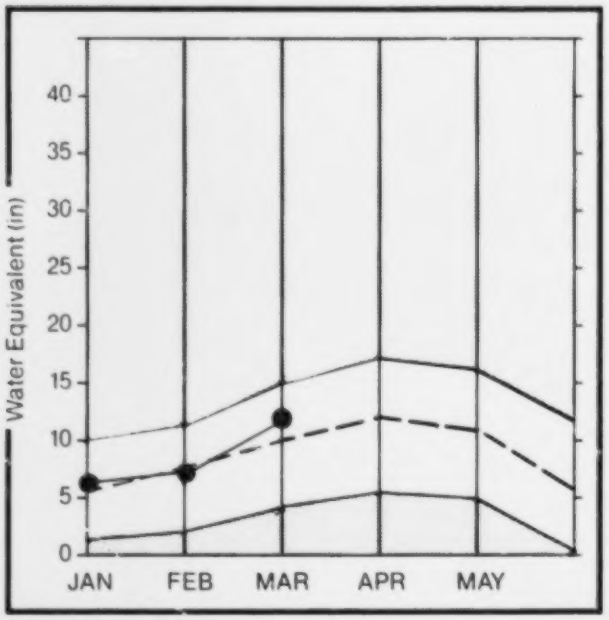
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ELK	2	129	107
LARAMIE	2	103	142
NORTH PLATTE	5	154	142
WHITE	2	112	113
YAMPA	6	123	117

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

BEST COPY AVAILABLE

Arkansas River Basin in Colorado

Mountain snowpack* (inches)

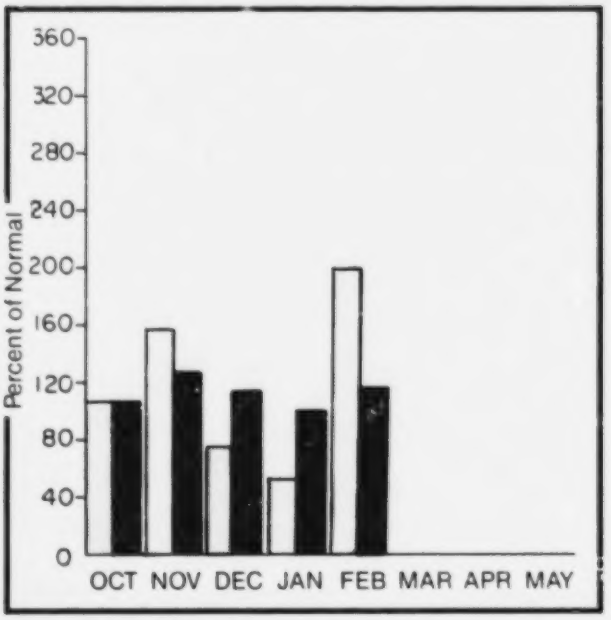


*Based on selected stations

Maximum ——— Average - - - -

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

SNOWPACK IN THE ARKANSAS RIVER BASIN IS 102% OF AVERAGE. THE LOWEST IN THE STATE. HOWEVER, THE CUCHARAS AND PURGATOIRE WATERSHEDS HAVE ONLY 67% OF AVERAGE SNOWPACK. STREAMFLOW FORECASTS ALONG THE MAIN STEM OF THE ARKANSAS RIVER ARE EXPECTED TO PRODUCE NEAR AVERAGE FLOWS, WHILE THE PURGATOIRE AND CHCHARAS RIVERS WILL HAVE BELOW NORMAL RUNOFF. LATE SEASON RUNOFF WILL BE MINIMAL IN THESE TWO WATERSHEDS. RESERVOIR STORAGE REMAINS EXCELLENT, AND IS NEARLY 4 TIMES ITS AVERAGE.

For more information contact your local Soil Conservation Service office.

ARKANSAS RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	30 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CHALK CREEK	APR-SEP	21.5	25.0	116	167	65				
ARKANSAS RIVER at Salida *	APR-SEP	300.0	345.0	115	134	76				
GRAPE CREEK near Westcliffe	APR-SEP	16.0	17.0	106	225	44				
ARKANSAS RIVER above Pueblo *	APR-SEP	278.0	336.0	120	213	33				
CUCHARAS RIVER near La Veta	APR-SEP	11.0	8.0	72	164	27				
HUERFANO RIVER near Redwing	APR-SEP	15.0	12.0	80	213	33				
PURGATOIRE RIVER at Trinidad *	APR-SEP	36.0	24.0	66	153	28				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
ADOBE	70.0	61.5	64.0	9.6
CLEAR CREEK	11.0	10.5	4.0	6.9
GREAT PLAINS	150.0	87.2	40.0	38.1
HOLBROOK	7.0	5.1	6.0	6.2
HORSE CREEK	28.0	27.0	20.0	6.0
JOHN MARTIN	616.0	333.6	316.0	47.1
LAKE HENRY	8.0	6.3	3.0	5.6
MEREDITH	42.0	39.4	40.0	8.9
PUEBLO	354.0	274.3	290.0	61.6
TRINIDAD	167.0	29.7	31.0	23.2
TURQUOISE	126.6	118.2	90.0	33.6
TWIN LAKES	86.0	78.5	76.0	25.0

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ARKANSAS	9	126	118
CUCHARAS	3	60	67
PURGATOIRE	1	61	47

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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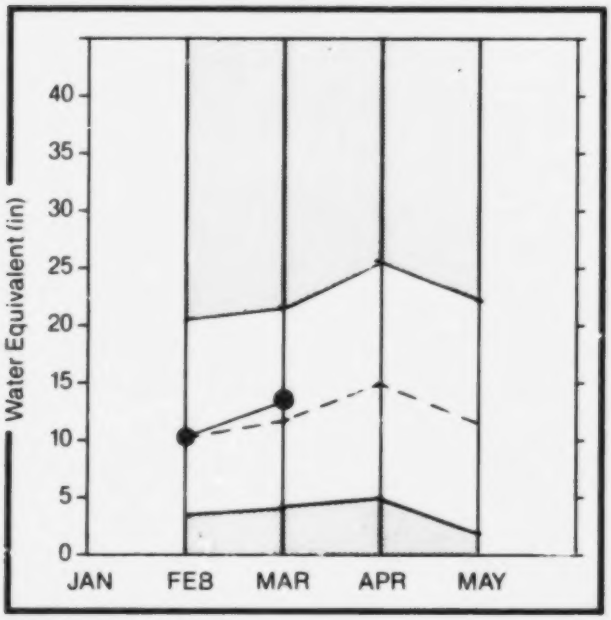
Rio Grande Basin in Colorado

Mountain snowpack* (inches)

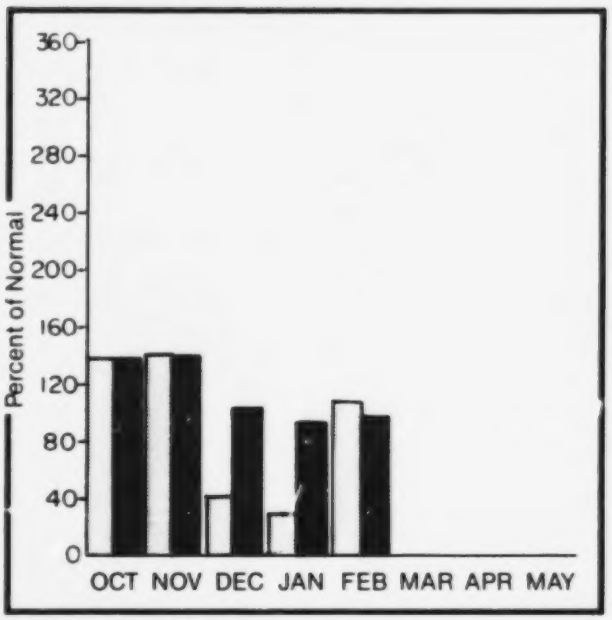


*Based on selected stations

Maximum ——— Average - - - -

Minimum ——— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

SNOWPACK IN THE HEADWATERS OF THE RIO GRANDE REMAINED UNCHANGED FROM LAST MONTH. SNOWPACK IS NOW 18% ABOVE NORMAL, BUT ONLY 90% OF LAST YEAR. LOW ELEVATION PRECIPITATION WAS ONLY ABOUT 75% OF AVERAGE FOR THE MONTH. THIS HAS DROPPED THE SEASONAL TOTALS NOW TO 115% OF AVERAGE. STREAMFLOW FORECASTS ALONG THE MAIN STEAM OF THE RIO GRANDE ARE EXPECTED TO PRODUCE SLIGHTLY ABOVE AVERAGE FLOWS. RESERVOIR STORAGE IN THE AREA IS 286% OF AVERAGE. THIS IS 21% HIGHER THAN LAST YEAR.

For more information contact your local Soil Conservation Service office.

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UPPER RIO GRANDE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000A)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SAGUACHE CREEK nr Saguache	APR-SEP	30.0	29.0	96	177	47				
RIO GRANDE at Thirty Mile Bridge *	APR-SEP	126.0	150.0	119	171	82				
RIO GRANDE at Wagon Wheel Gap *	APR-SEP	310.0	360.0	116	149	89				
SOUTH FK OF RIO GRANDE at South Fork	APR-SEP	127.0	145.0	114	148	86				
RIO GRANDE near Del Norte *	APR-SEP	494.0	575.0	116	179	76				
ALAMOSA CREEK above Terrace Res	APR-SEP	66.0	78.0	118	162	89				
LA JARA CREEK near Capulin	MAR-JUL	7.8	8.5	109	141	77				
TRINCHERA WATER SUPPLY *	APR-JUL	26.3	21.0	79	104	59				
CONEJOS RIVER near Mogote	APR-SEP	195.0	220.0	112	144	89				
LOS PINOS near Ortiz	APR-SEP	69.0	70.0	101	135	68				
SAN ANTONIO RIVER at Ortiz	APR-SEP	15.2	15.0	99	138	59				
CULEBRA CREEK at San Luis *	APR-SEP	18.0	12.0	66	139	28				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CONTINENTAL	27.0	10.7	9.0	6.8
PLATORO	60.0	47.8	34.0	9.2
RIO GRANDE	51.0	38.3	32.0	18.2
SANCHEZ	103.0	48.2	38.0	13.7
SANTA MARIA	45.0	24.4	14.0	6.1
TERRACE	18.0	12.0	10.0	3.6

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ALAMOSA	1	95	137
CONEJOS	6	87	109
CULEBRA	4	39	78
RIO GRANDE, CO	13	99	111

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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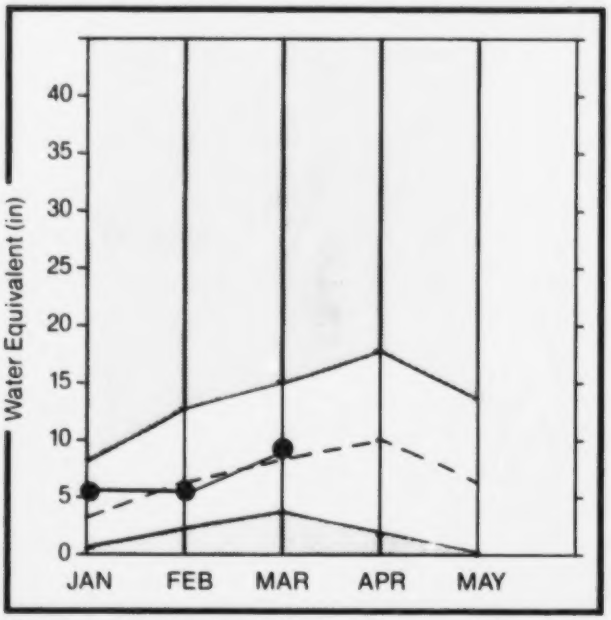
Rio Grande Basin in New Mexico

Mountain snowpack* (inches)

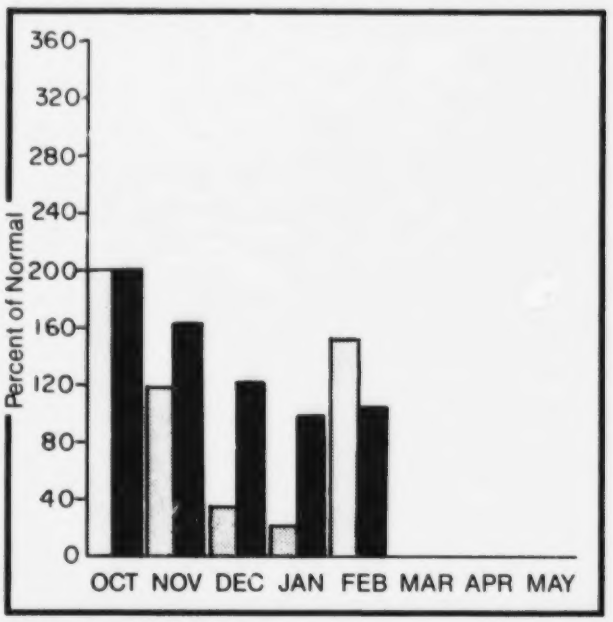


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

LOW ELEVATION PRECIPITATION FOR THE MONTH WAS 53% ABOVE NORMAL, AND 107% OF AVERAGE FOR THE SEASON. SNOWPACK REMAINED UNCHANGED FROM LAST MONTH AND IS STILL 68% OF AVERAGE, BUT ONLY 48% OF LAST YEAR. THE MAIN CHANNEL ALONG THE RIO GRANDE AND RIO CHAMA RIVERS SHOULD PRODUCE SLIGHTLY ABOVE AVERAGE STREAMFLOWS, BUT THROUGHOUT MUCH OF THE REST OF THE STATE BELOW AVERAGE FLOWS SHOULD BE EXPECTED. LATE SEASON RUNOFF IS EXPECTED TO BE POOR. RESERVOIR STORAGE REMAINS EXCELLENT AT 367% OF AVERAGE.

For more information contact your local Soil Conservation Service office.

LOWER RIO GRANDE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COSTILLA CREEK at Costilla *	MAR-JUL	19.0	14.0	[illegible]	[illegible]	[illegible]				
GALLINAS CREEK near Montezuma	MAR-JUL	7.0	4.0	[illegible]	[illegible]	[illegible]				
JEMEZ RIVER near Jemez	MAR-JUL	40.0	28.0	[illegible]	[illegible]	[illegible]				
PECOS RIVER at Pecos	MAR-JUL	45.0	28.0	[illegible]	[illegible]	[illegible]				
RED RIVER at Mouth	MAR-JUL	30.0	22.0	[illegible]	[illegible]	[illegible]				
RIO CHAMA at El Vado	MAR-JUL	208.0	210.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at Otowi *	MAR-JUL	600.0	650.0	[illegible]	[illegible]	[illegible]				
RIO GRANDE at San Marcial *	MAR-JUL	420.0	460.0	[illegible]	[illegible]	[illegible]				
RIO HONDO near Valdez	MAR-JUL	15.0	10.0	[illegible]	[illegible]	[illegible]				
RIO PUEBLO de TAOS bl Los Cordovas	MAR-JUL	27.0	18.0	[illegible]	[illegible]	[illegible]				
SANTA CRUZ RIVER at Cundiyo	MAR-JUL	14.0	8.0	[illegible]	[illegible]	[illegible]				
SANTA FE near Santa Fe	MAR-JUL	2.9	2.0	[illegible]	[illegible]	[illegible]				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
LAKE AVALON	6.0	[illegible]	[illegible]	[illegible]
CABALLO	344.0	[illegible]	[illegible]	[illegible]
CONCHAS	330.0	[illegible]	[illegible]	[illegible]
EL VADO	195.4	[illegible]	[illegible]	[illegible]
ELEPHANT BUTTE	2195.0	[illegible]	[illegible]	[illegible]
LAKE McMILLAN	34.0	[illegible]	[illegible]	[illegible]
SANTA ROSA	447.0	[illegible]	[illegible]	[illegible]
SUMNER	102.0	[illegible]	[illegible]	[illegible]

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
PECOS RIVER	1	[illegible]	[illegible]
RED RIVER	2	[illegible]	[illegible]
RIO CHAMA	3	[illegible]	[illegible]
RIO GRANDE, NM	17	[illegible]	[illegible]
RIO HONDO	0	[illegible]	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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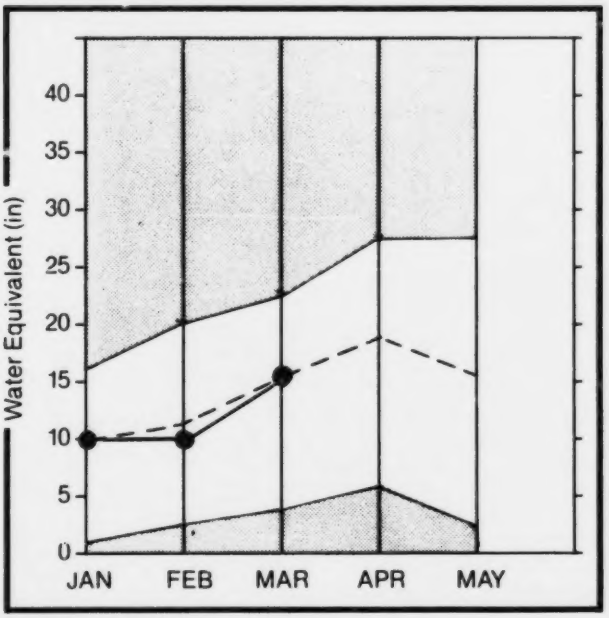
San Miguel, Dolores, Animas and San Juan Basins in Colorado and New Mexico

Mountain snowpack* (inches)

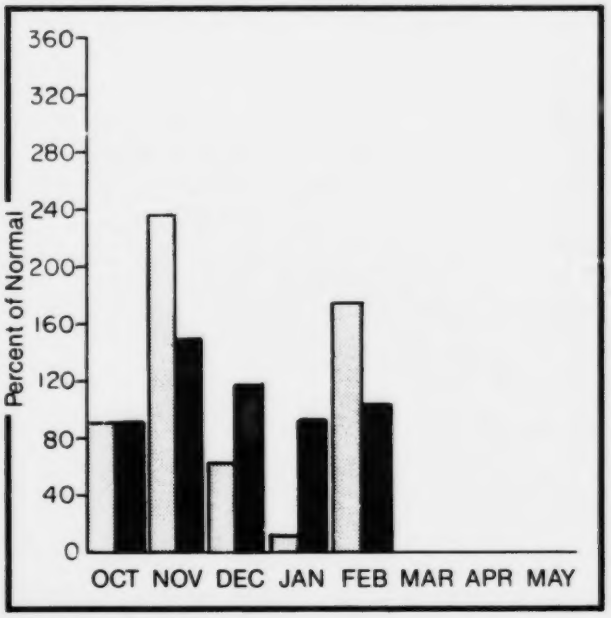


*Based on selected stations

Maximum ———— Average – – – –

Minimum ———— Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯ Year to date precipitation ▮

WATER SUPPLY OUTLOOK:

SNOWPACK IN THE HEADWATERS OF THE SAN JUAN RIVER BASIN IS 10% ABOVE AVERAGE, THE HIGHEST IN SOUTHWEST COLORADO. THE ANIMAS AND DOLORES WATERSHEDS HAVE NEAR AVERAGE SNOWPACK CONDITIONS. LOW ELEVATION PRECIPITATION OVER MUCH OF THE AREA WAS 76% ABOVE NORMAL FOR THE MONTH. THIS HELPED BOOST THE SEASONAL TOTAL TO 110% OF AVERAGE. STREAMFLOW VOLUMES ARE FORECASTED TO PRODUCE NEAR AVERAGE VOLUMES. LATE SEASON WATER SUPPLIES MAY BE BELOW NORMAL IF SUMMER WEATHER CONDITIONS ARE DRY.

For more information contact your local Soil Conservation Service office.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SAN MIGUEL RIVER at Placerville	APR-SEP	131.2	128.0	97	152	62				
DOLORES RIVER at Dolores	APR-SEP	256.0	270.0	105	136	80				
SAN JUAN RIVER at Carracus	APR-SEP	400.7	485.0	121	148	77				
PIEDRA CREEK at Arboles	APR-SEP	225.0	250.0	111	142	89				
LOS PINOS RIVER at Bayfield *	APR-SEP	219.0	237.0	108	138	79				
INFLOW TO NAVAJO RESERVOIR *	APR-JUL	729.0	850.0	116	130	91				
ANIMAS RIVER at Durango	APR-SEP	458.0	505.0	110	137	87				
FLORIDA RIVER at Bondad	APR-SEP	37.0	39.0	105	135	79				
LA PLATA RIVER at Hesperus	APR-SEP	26.0	27.0	103	142	81				
MANCOS RIVER near Towaoc	MAR-JUL	28.2	30.0	106	147	64				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
GROUNDHOG	21.7	13.2	11.0	9.6
JACKSON GULCH	10.0	5.3	3.0	4.4
LEMON	40.0	27.0	25.0	17.2
NARRAGUINNEP	19.0	13.1	13.0	10.0
NAVAJO	1696.0	1398.0	1272.0	752.0
VALLECITO	126.0	39.0	31.0	32.4

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
ANIMAS	6	98	106
DOLORES	6	92	99
SAN JUAN	7	87	110

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

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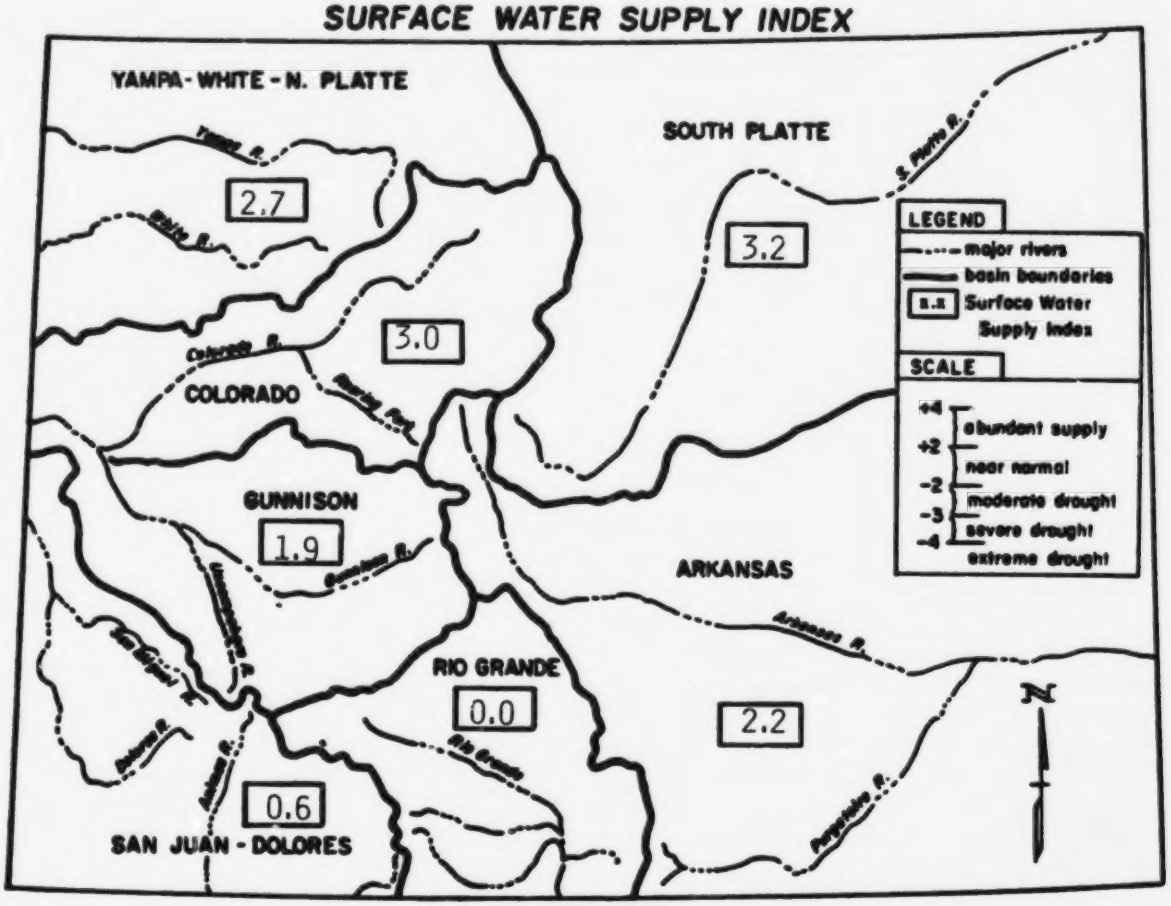
Date: March 1, 1986

SURFACE WATER SUPPLY INDEX



COLORADO

The Surface Water Supply Index (SWSI) is a weighted value derived for each major basin which generally expresses the potential availability of the forthcoming season's water supply. The components used in computing the index are reservoir storage, snowpack water equivalent, and precipitation. The SWSI number for each basin ranges from a -4.00 (prospective water supplies extremely poor) to a +4.00 (prospective water supplies plentiful). The SWSI number is only a general indicator of surface water supply conditions. Further data analyses may be required in specific situations to more fully understand the impacts of abnormally dry or wet conditions suggested by the SWSI. Development of the SWSI has been a cooperative effort between the Colorado State Engineers' Office and the Soil Conservation Service.

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OTHER INFORMATION

WIND EROSION REPORT:

WIND EROSION IN COLORADO DURING FEBRUARY WAS MOST SEVERE IN A STRIP EXTENDING FROM PUEBLO THROUGH THE COUNTIES OF LINCOLN, CHEYENNE, KIOWA AND KIT CARSON. SOME TRADITIONAL WIND EROSION FROM AREAS SUCH AS THE SAN LUIS VALLEY AND EXTREME SOUTHEAST COLORADO REPORTED A GENERAL LACK OF WIND. CONSIDERABLE VISUAL DUST BLOWING WAS REPORTED IN NORTHEAST COLORADO FROM WIND STORMS DURING THE SECOND AND THIRD WEEKS OF THE MONTH, BUT RESULTED IN LITTLE LAND DAMAGE AND CROP LOSS DUE TO GOOD SURFACE SOIL MOISTURE FROM LATE 1995 SNOW STORMS. SOME COUNTIES REPORTED SPOTTY STANDS OF WHEAT WHICH ALSO CONTRIBUTES TO A HIGH ACREAGE OF LAND IN CONDITION TO BLOW. LAND REPORTED AS DAMAGED INCREASED SIGNIFICANTLY FROM 39,910 ACRES IN JANUARY, TO 201,570 ACRES IN FEBRUARY, AND CROPS OR COVER DESTROYED, INCREASED FROM 2,520 ACRES TO 26,840 ACRES. LAND REPORTED IN CONDITION TO BLOW INCREASED FROM 1,403,255 ACRES TO 2,014,842 FROM JANUARY TO FEBRUARY. THE WIND EROSION PROBLEM REMAINS VERY VOLATILE FOR THE REMAINDER OF THE WIND EROSION SEASON. MARCH AND APRIL ARE HIGH WIND MONTHS. THE GROWING WHEAT WILL BE RAPIDLY DEPLETING SOIL MOISTURE. MOISTURE IS GENERALLY QUITE GOOD OVER MOST OF THE WHEAT GROWING AREA OF THE EASTERN PLAINS DUE TO AN EARLY NOVEMBER SNOW STORM. HOWEVER, ADDITIONAL SPRING MOISTURE WILL SOON BE NEEDED TO HELP THE WHEAT ACTIVELY GROWING, AND PRODUCE A GOOD COVER AS WELL AS HIGH YIELDING GRAIN CROP AT HARVEST.

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The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State	Colorado State Engineer
	Colorado State Soil Conservation Board
	New Mexico State Engineer
	Colorado State University Experiment Station
	Rocky Mountain Forest and Range Experiment Station
	New Mexico Department of Game and Fish
	University of Colorado, INSTAAR
Federal	U.S. Department of Agriculture
	Forest Service
	Soil Conservation Service
	U.S. Department of the Interior
	Bureau of Reclamation
	Geological Survey
	National Park Service
	U.S. Department of Commerce
	NOAA, National Weather Service
	NOAA, National Environmental Satellite Service
	U.S. Department of Defense
	Army Engineer Corps
	National Aeronautics and Space Administration
	Goddard Space Flight Center
Local	Colorado Public Service Company
	Public Service Company of New Mexico
	City of Denver
	City of Boulder
	City of Greeley
	City of Fort Collins
	Arkansas Valley Ditch Association
	Colorado River Water Conservation District
	Farmers Reservoir and Irrigation Company
	San Luis Valley Irrigation District
	Santa Maria Reservoir Company
	Costilla Land Company
	Montezuma Irrigation Company
	Uncompahgre Valley Water Users' Association
	Twin Lakes Reservoir and Canal Company
	Trinchera Irrigation Company
	Aspen Skiing Corp.
	Colorado Fuel and Iron Corp.
	Climax Molybdenum Corp.
	Copper Mountain Ski Area
	Lake Eldora Corp.
	Vail Associates, Inc.
	Taylor Lumber and Land Company
	Idarado Mining Corp.
Private	Otto Goemmer, Colorado
	Moreno Ranch, New Mexico

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

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